

I Claim:

1. Apparatus for producing instantaneous live virtual surround sound broadcasting, comprising:
  - a microphone system having an oval portable frame and a plurality of linear pick-up pattern microphones lying within a plane and mounted on said frame, each microphone having a diaphragm facing outwards, the diaphragms positioned on a non-circular generally elliptical figure when viewed in a direction perpendicular to said plane;
  - sound processing means having a plurality of inputs and at least two outputs;
  - means connecting outputs from the microphones individually to the inputs of said sound processing means;
  - a pair of speakers; and
  - means connecting the outputs from said sound processing means individually to the speakers.
2. Apparatus as claimed in claim 1, said means connecting the outputs from the microphones to the sound processing means includes an interface, said interface including amplification means.
3. Apparatus as claimed in claim 1, said means connecting the outputs from the microphones to said sound processing means comprising an interface, said interface including voltage control means.
4. Apparatus as claimed in claim 1, said microphone system comprising five microphones mounted on said frame and lying in said plane and including centre, left, right, left side and right side microphones and said top and bottom microphones.
5. Apparatus as claimed in claim 4, said sound processing means having

3 centre, top, right side, left side, right and left inputs, said microphones each  
4 connected to the related input on said chip, and said top microphone  
5 → connected to all of the inputs on said sound processing means.

6. Apparatus as claimed in claim 1, wherein said sound processing means is a  
5 "virtual surround" semiconductor chip.

7. Apparatus as claimed in claim 1, said sound processing means is a DSP  
semiconductor.

8. Apparatus as claimed in claim 1, wherein said sound processing means is  
connectable with data processing means whereby "surround sound" is  
created mathematically.

9. Apparatus as claimed in claim 8, wherein said data processing means  
includes real time processing algorithms.

10. A method of producing apparent multidirectional sound, comprising:  
connecting outputs from a plurality of microphones to inputs of a sound  
processing means, the microphones mounted on an oval portable frame, the  
microphones of linear pick-up pattern and lying within a plane, each  
microphone having a diaphragm facing outwards with the diaphragms  
positioned on a non-circular generally elliptical figure mounted in a direction  
perpendicular to said plane; further linear pick-up pattern microphones  
15 mounted on said frame, one above and one below said frame, and including  
outwardly facing diaphragms; and connecting outputs from said sound  
processing means to a pair of speakers.

11. A method of producing instantaneous live virtual surround sound  
broadcasting comprising connecting outputs from a plurality of microphones,  
25 including centre, left, right, left side, right side and bottom microphones, at a

plurality of separate individual inputs of a sound processing means, and connecting output from a top microphone to all of the inputs of the sound processing means, other microphones of the linear pick-up pattern, the centre, left, right, left side and right side microphones mounted on an oval frame, the microphones lying in a plane, and each having a diaphragm facing outwards in a non-circular generally elliptical figure when received in a direction perpendicular to said plane, the top and bottom microphones mounted on said frame and above and below said frame respectively.

12. A method as claimed in claim 10, including connecting said outputs from said microphones to said sound processing means through an interface.
13. A method as claimed in claim 12, including variably controlling said inputs at said interface.
14. A method as claimed in claim 12, including amplifying said inputs at said interface.
15. A method as claimed in claim 11, including connecting said outputs from said microphones to said sound processing means through an interface.
16. A method as claimed in claim 11, including variably controlling said inputs at said interface.
17. A method as claimed in claim 11, including amplifying said inputs at said interface.